

## Operation Manual

Multi-CD control High power CD/MP3/WMA  
player with FM/AM tuner

# DEH-P5650MP

English

Español

Português (B)

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**SUPER TUNER III D**

## Thank you for buying this Pioneer product.

Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

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## About this manual

This unit features a number of sophisticated functions ensuring superior reception and operation. All the functions have been designed for the easiest possible use, but many are not self-explanatory. This operation manual will help you benefit fully from this unit's potential and to maximize your listening enjoyment. We recommend that you familiarize yourself with the functions and their operation by reading through the manual before you begin using this unit. It is especially important that you read and observe precautions on this page and in other sections. ▢

## Precautions

**CAUTION:**  
USE OF CONTROL OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

**CAUTION:**  
THE USE OF OPTICAL INSTRUMENTS WITH THIS PRODUCT WILL INCREASE EYE HAZARD.

- Keep this manual handy as a reference for operating procedures and precautions.
- Always keep the volume low enough so you can hear sounds outside of the car.
- Protect this unit from moisture.
- If the battery is disconnected or discharged, the preset memory will be erased and must be reprogrammed.
- If this unit does not operate properly, contact your dealer or nearest authorized Pioneer Service Station. ▢

## Features

### CD playback

Music CD/CD-R/CD-RW playback is possible.

### MP3 file playback

You can play back MP3 files recorded on CD-ROM/CD-R/CD-RW (ISO9660 Level 1/Level 2 standard recordings).

- Supply of this product only conveys a license for private, non-commercial use and does not convey a license nor imply any right to use this product in any commercial (i.e. revenue-generating) real time broadcasting (terrestrial, satellite, cable and/or any other media), broadcasting/streaming via internet, intranets and/or other networks or in other electronic content distribution systems, such as pay-audio or audio-on-demand applications. An independent license for such use is required. For details, please visit <http://www.mp3licensing.com>.

### WMA file playback

You can play back WMA files recorded on CD-ROM/CD-R/CD-RW (ISO9660 Level 1/Level 2 standard recordings).

### WAV file playback

You can play back WAV files recorded on CD-ROM/CD-R/CD-RW (ISO9660 Level 1/Level 2 standard recordings). ▢

## About WMA



The Windows Media™ logo printed on the box indicates that this unit can playback the WMA data.

WMA is short for Windows Media Audio and refers to an audio compression technology that is developed by Microsoft Corporation. WMA data can be encoded by using Windows Media Player version 7 or later.

Microsoft, Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

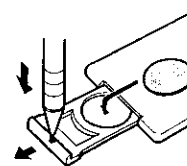
### Notes

- With some applications used to encode WMA files, this unit may not operate correctly.
- With some applications used to encode WMA files, album names and other text information may not be correctly displayed. ▢

## Use and care of the remote control

### Installing the battery

Slide the tray out on the back of the remote control and insert the battery with the plus (+) and minus (-) poles pointing in the proper direction.



### WARNING

Keep the battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.

### CAUTION

- Use only one **CR2025 (3 V)** lithium battery.
- Remove the battery if the remote control is not used for a month or longer.
- Do not recharge, disassemble, heat or dispose of the battery in fire.
- Do not handle the battery with metallic tools.
- Do not store the battery with metallic materials.
- In the event of battery leakage, wipe the remote control completely clean and install a new battery.
- When disposing of used batteries, please comply with governmental regulations or environmental public institution's rules that apply in your country/area.

## Using the remote control

Point the remote control in the direction of the front panel to operate.

### Important

- Do not store the remote control in high temperatures or direct sunlight.
- The remote control may not function properly in direct sunlight.
- Do not let the remote control fall onto the floor, where it may become jammed under the brake or accelerator pedal. ▢

## Protecting your unit from theft

The front panel can be detached from the head unit and stored in the protective case provided to discourage theft.

- If the front panel is not detached from the head unit within five seconds of turning off the ignition, a warning tone will sound.

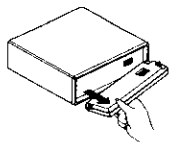
- You can turn off the warning tone. See *Switching the warning tone* on page 39.

### Important

- Never use force or grip the display and the buttons tightly when removing or attaching.
- Avoid subjecting the front panel to excessive shocks.
- Keep the front panel out of direct sunlight and high temperatures.

### Removing the front panel

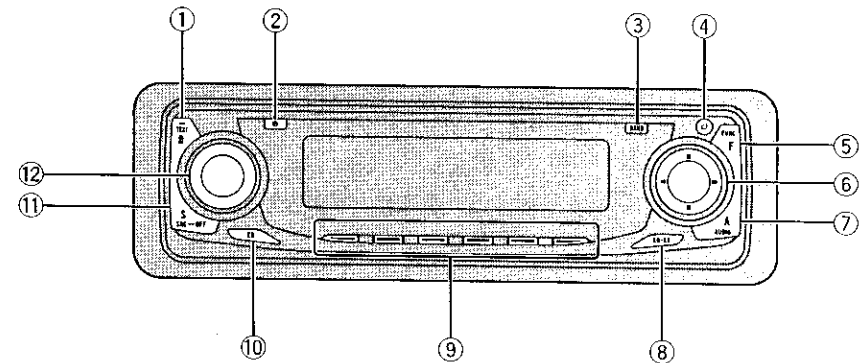
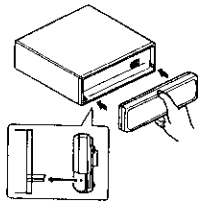
- Press **OPEN** to open the front panel.
- Grip the left side of the front panel and pull it gently outward.  
Take care not to grip it tightly or to drop it.



- Put the front panel into the protective case provided for safe keeping.

### Attaching the front panel

- Replace the front panel by holding it upright to this unit and clipping it securely into the mounting hooks.

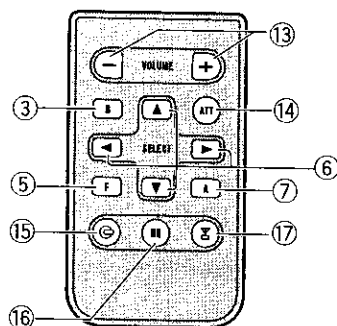


### Head unit

- DISPLAY button**  
Press to select different displays.
- CLOCK button**  
Press to change to the clock display.
- BAND button**  
Press to select among three FM and one AM bands and cancel the control mode of functions.
- OPEN button**  
Press to open the front panel.
- FUNCTION button**  
Press to select functions.
- ▲/▼/◀/▶ buttons**  
Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.
- AUDIO button**  
Press to select various sound quality controls.
- EQ-EX button**  
Press and hold to switch between EQ-EX and SFEQ functions. Press to operate each function.
- 1-6 buttons**  
Press for preset tuning and disc number search when using a multi-CD player.
- EQ button**  
Press to select various equalizer curves.
- SOURCE button**  
This unit is turned on by selecting a source. Press to cycle through all of the available sources.
- VOLUME**  
When you press **VOLUME**, it extends outward so that it becomes easier to turn. To retract **VOLUME**, press it again. Rotate to increase or decrease the volume.

### Remote control

Operation is the same as when using the button on the head unit.



### 13 VOLUME button

Press to increase or decrease the volume.

### 14 ATT button

Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

### 15 CD button

Press to select the built-in or multi-CD player as the source.

### 16 PAUSE button


Press to turn pause on or off.

### 17 TUNER button

Press to select the tuner as the source. 

## Turning the unit on

- Press **SOURCE** to turn the unit on.

When you select a source the unit is turned on. 

## Selecting a source

You can select a source you want to listen to. To switch to the built-in CD player, load a disc in this unit (refer to page 13).

- When using the head unit, press **SOURCE** to select a source.

Press **SOURCE** repeatedly to switch between the following sources:

**Tuner—Television—Built-in CD player—Multi-CD player—External unit 1—External unit 2—AUX**

- When using the remote control, press **TUNER** or **CD** to select a source.


Press each button repeatedly to switch between the following sources:

**TUNER: Television—Tuner—Sources off**  
**CD: Built-in CD player—Multi-CD player—Sources off**

### Notes

- In the following cases, the sound source will not change:
  - When a unit corresponding to each source is not connected to this unit.
  - When no disc is set in this unit.
  - When no magazine is set in the multi-CD player.
  - When the AUX (auxiliary input) is set to off (refer to page 39).
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this unit. Two external units can be controlled by this unit. When two exter-

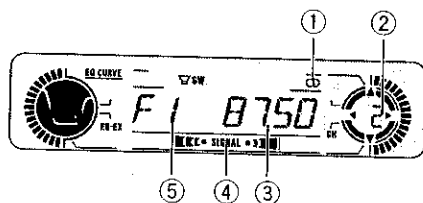
nal units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this unit.

- When this unit's blue/white lead is connected to the car's auto-antenna relay control terminal, the car's antenna extends when this unit's source is turned on. To retract the antenna, turn the source off. 

## Turning the unit off

- Press **SOURCE** and hold until the unit turns off. 

## Listening to the radio



These are the basic steps necessary to operate the radio. More advanced tuner operation is explained starting on the next page.

### Important

If you are using this unit in North, Central or South America, reset the AM tuning step (see *Setting the AM tuning step* on page 39).

#### ① Stereo (CD) indicator

Shows that the frequency selected is being broadcast in stereo.

#### ② Preset number indicator

Shows what preset has been selected.

#### ③ Frequency indicator

Shows to which frequency the tuner is tuned.

#### ④ Signal level indicator

Shows the radio wave strength.

#### ⑤ Band indicator

Shows which band the radio is tuned to, AM or FM.

### 1 Press SOURCE to select the tuner.

Press **SOURCE** until you see **TUNER** displayed.

### 2 Use VOLUME to adjust the sound level.

Rotate to increase or decrease the volume.

### 3 Press BAND to select a band.

Press **BAND** until the desired band is displayed, **F1**, **F2**, **F3** for FM or **AM**.

### 4 To perform manual tuning, press ◀ or ▶ with quick presses.

The frequencies move up or down step by step.

### 5 To perform seek tuning, press and hold ◀ or ▶ for about one second and release.

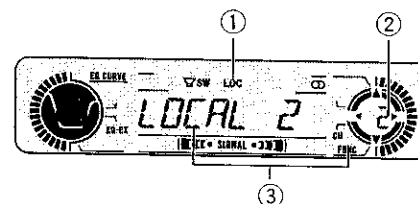
The tuner will scan the frequencies until a broadcast strong enough for good reception is found.

- You can cancel seek tuning by pressing either ◀ or ▶ with a quick press.
- If you press and hold ◀ or ▶ you can skip broadcasting stations. Seek tuning starts as soon as you release the buttons.

### Note

When the frequency selected is being broadcast in stereo the stereo (CD) indicator will light.

## Introduction of advanced tuner operation



#### ① LOC indicator

Shows when local seek tuning is on.

#### ② Preset number indicator

Shows what preset has been selected.

#### ③ Function display

Shows the function status.

### • Press FUNCTION to display the function names.

Press **FUNCTION** repeatedly to switch between the following functions:

**BSM** (best stations memory)—**LOCAL** (local seek tuning)

- To return to the frequency display, press **BAND**.

### Note

If you do not operate the function within about 30 seconds, the display is automatically returned to the frequency display.

## Storing and recalling broadcast frequencies

If you press any of the preset tuning buttons **1–6** you can easily store up to six broadcast

frequencies for later recall with the touch of a button.

### • When you find a frequency that you want to store in memory press a preset tuning button 1–6 and hold until the preset number stops flashing.

The number you have pressed will flash in the preset number indicator and then remain lit.

The selected radio station frequency has been stored in memory.

The next time you press the same preset tuning button **1–6** the radio station frequency is recalled from memory.

### Notes

- Up to 18 FM stations, 6 for each of the three FM bands, and 6 AM stations can be stored in memory.
- You can also use ▲ and ▼ to recall radio station frequencies assigned to preset tuning buttons **1–6**.

## Tuning in strong signals

Local seek tuning lets you tune in only those radio stations with sufficiently strong signals for good reception.

### 1 Press FUNCTION to select LOCAL.

Press **FUNCTION** until **LOCAL** appears in the display.

### 2 Press ▲ to turn local seek tuning on.

Local seek sensitivity (e.g., **LOCAL 2**) appears in the display.

### 3 Press ◀ or ▶ to set the sensitivity.

There are four levels of sensitivity for FM and two levels for AM:

FM: **LOCAL 1**—**LOCAL 2**—**LOCAL 3**—**LOCAL 4**

## AM: LOCAL 1—LOCAL 2

The **LOCAL 4** setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.

- 4 When you want to return to normal seek tuning, press **▼** to turn local seek tuning off.

**LOCALOFF** appears in the display.

## Storing the strongest broadcast frequencies

BSM (best stations memory) lets you automatically store the six strongest broadcast frequencies under preset tuning buttons **1–6** and once stored there you can tune in to those frequencies with the touch of a button.

- 1 Press **FUNCTION** to select BSM.

Press **FUNCTION** until **BSM** appears in the display.

- 2 Press **▲** to turn BSM on.

**BSM** begins to flash. While **BSM** is flashing the six strongest broadcast frequencies will be stored under preset tuning buttons **1–6** in order of their signal strength. When finished, **BSM** stops flashing.

- To cancel the storage process, press **▼**.

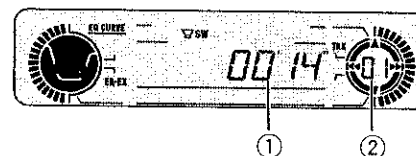


### Note

Storing broadcast frequencies with BSM may replace broadcast frequencies you have saved using **1–6**.

## Built-in CD Player

### Playing a CD



These are the basic steps necessary to play a CD with your built-in CD player. More advanced CD operation is explained starting on the next page.

- ① **Play time indicator**

Shows the elapsed playing time of the current track.

- ② **Track number indicator**

Shows the track currently playing.

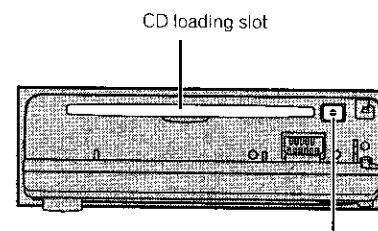
- 1 Press **OPEN** to open the front panel.

CD loading slot appears.

- After a CD has been inserted, press **SOURCE** to select the built-in CD player.

- 2 Insert a CD into the CD loading slot.

Playback will automatically start.



- You can eject a CD by pressing **EJECT**.
- To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

- 3 Close the front panel.

- 4 Use **VOLUME** to adjust the sound level. Rotate to increase or decrease the volume.

- 5 To perform fast forward or reverse, press and hold **◀** or **▶**.

- If you select the search method to **ROUGH**, pressing and holding **◀** or **▶** enables you to search every ten track in the current disc. (Refer to *Selecting the search method* on page 15.)

- 6 To skip back or forward to another track, press **◀** or **▶**.

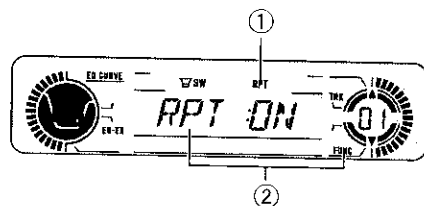
Pressing **▶** skips to the start of the next track. Pressing **◀** once skips to the start of the current track. Pressing again will skip to the previous track.



### Notes

- The built-in CD player plays one, standard, 12-cm or 8-cm (single) CD at a time. Do not use an adapter when playing 8-cm CDs.
- Do not insert anything other than a CD into the CD loading slot.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- ▲** and **▼** can be operated when MP3, WMA or WAV is playing.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed. Refer to *Understanding built-in CD player error messages* on page 42.
- When a CD TEXT disc is inserted, the disc and track titles begin to scroll to the left automatically.

## Introduction of advanced built-in CD player operation



### ① RPT indicator

Shows when repeat play is turned on.

### ② Function display

Shows the function status.

### ● Press FUNCTION to display the function names.

Press **FUNCTION** repeatedly to switch between the following functions:

**RPT** (repeat play)—**RDM** (random play)—**SCAN** (scan play)—**PAUSE** (pause)—**COMP** (compression and BMX)—**FF/REV** (search method)—**TAG** (tag display)

- To return to the playback display, press **BAND**.

### ✎ Notes

- When playing audio data (CD-DA), it is not effective even if you turn **TAG** (tag display) on. (Refer to page 22.)
- If you do not operate the function within about 30 seconds, the display is automatically returned to the playback display.

## Repeating play

Repeat play lets you hear the same track over again.

### 1 Press FUNCTION to select RPT.

Press **FUNCTION** until **RPT** appears in the display.

### 2 Press ▲ to turn repeat play on.

**RPT:ON** appears in the display. The track currently playing will play and then repeat.

### 3 Press ▼ to turn repeat play off.

**RPT:OFF** appears in the display. The track currently playing will continue to play and then play the next track.

### ✎ Note

If you perform track search or fast forward/reverse, repeat play is automatically cancelled.

## Playing tracks in a random order

Random play lets you play back tracks on the CD in a random order.

### 1 Press FUNCTION to select RDM.

Press **FUNCTION** until **RDM** appears in the display.

### 2 Press ▲ to turn random play on.

**RDM:ON** appears in the display. Tracks will play in a random order.

### 3 Press ▼ to turn random play off.

**RDM:OFF** appears in the display. Tracks will continue to play in order.

## Scanning tracks of a CD

Scan play lets you hear the first 10 seconds of each track on the CD.

### 1 Press FUNCTION to select SCAN.

Press **FUNCTION** until **SCAN** appears in the display.

### 2 Press ▲ to turn scan play on.

**SCAN:ON** appears in the display. The first 10 seconds of each track is played.

### 3 When you find the desired track press ▼ to turn scan play off.

**SCAN:OFF** appears in the display. The track will continue to play.

- If the display has automatically returned to the playback display, select **SCAN** again by pressing **FUNCTION**.

### ✎ Note

After scanning of a CD is finished, normal playback of the tracks will begin again.

## Pausing CD playback

Pause lets you temporarily stop playback of the CD.

### 1 Press FUNCTION to select PAUSE.

Press **FUNCTION** until **PAUSE** appears in the display.

### 2 Press ▲ to turn pause on.

**PAUSE:ON** appears in the display. Play of the current track pauses.

### 3 Press ▼ to turn pause off.

**PAUSE:OFF** appears in the display. Play will resume at the same point that you turned pause on.

## Using compression and BMX

Using the **COMP** (compression) and **BMX** functions let you adjust the sound playback quality of the CD player. Each of the functions have a two-step adjustment. The **COMP** function balances the output of louder and softer sounds at higher volumes. **BMX** controls sound reverberations to give playback a fuller sound. Listen to each of the effects as you select through them and use the one that best enhances the playback of the track or CD that you are listening to.

### 1 Press FUNCTION to select COMP.

Press **FUNCTION** until **COMP** appears in the display.

### 2 Press ▲ or ▼ to select your favorite setting.

Press **▲** or **▼** repeatedly to switch between the following settings:

**COMP OFF—COMP 1—COMP 2—**  
**COMP OFF—BMX 1—BMX 2**

## Selecting the search method

You can switch the search method between fast forward/reverse and searching every 10 track.

### 1 Press FUNCTION to select FF/REV.

Press **FUNCTION** until **FF/REV** appears in the display.

- If the search method **ROUGH** has been previously selected, **ROUGH** will be displayed.

### 2 Press ◀ or ▶ to select the search method.

Press **◀** or **▶** until the desired search method appears in the display.

- FF/REV** – Fast forward and reverse
- ROUGH** – Searching every 10 track



## Built-in CD Player

## Searching every 10 track in the current disc

If a disc contains over 10 tracks, you can search every 10 track. When a disc contains a lot of tracks, you can roughly search the track you want to play.

## 1 Select the search method ROUGH.

Refer to *Selecting the search method* on the previous page.

## 2 Press and hold ◀ or ▶ to search every 10 track in a disc.

- If a disc contains less than 10 tracks, pressing and holding ▶ recalls the last track of a disc. Also, if the remaining number of tracks after searching every 10 tracks are less than 10, pressing and holding ▶ recalls the last track of a disc.
- If a disc contains less than 10 tracks, pressing and holding ◀ recalls the first track of a disc. Also, if the remaining number of tracks after searching every 10 tracks are less than 10, pressing and holding ◀ recalls the first track of a disc. □

## Using disc title functions

You can input CD titles and display the title. The next time you insert a CD for which you have entered a title, the title of that CD will be displayed.

## Entering disc titles

Disc title input lets you input CD titles up to 8 letters long and up to 48 disc titles into this unit.

## 1 Play a CD that you want to enter the title.

## 2 Press FUNCTION and hold until TITLE IN appears in the display.

- When playing a CD TEXT disc, you cannot switch to **TITLE IN**. The disc title will have already been recorded on a CD TEXT disc.

## 3 Press ▲ or ▼ to select a letter of the alphabet.

Each press of ▲ will display a letter of the alphabet in **A B C ... X Y Z**, numbers and symbols in **1 2 3 ... > [ ]** order. Each press of ▼ will display a letter in the reverse order, such as **Z Y X ... C B A** order.



## 4 Press ▶ to move the cursor to the next character position.

When the letter you want is displayed, press ▶ to move the cursor to the next position and then select the next letter. Press ◀ to move backwards in the display.

## 5 Move the cursor to the last position by pressing ▶ after entering the title.

When you press ▶ one more time, the entered title is stored in memory.

## 6 Press BAND to return to the playback display.



## Notes

- Titles remain in memory, even after the disc has been removed from this unit, and are recalled when the disc is reinserted.
- After data for 48 discs has been stored in memory, data for a new disc will overwrite the oldest one.
- If you connect a multi-CD player, you can input disc titles for up to 100 discs.

## Built-in CD Player

## Displaying disc titles

You can display the title of any disc that has had a disc title entered.

## ● Press DISPLAY.

Press **DISPLAY** repeatedly to switch between the following settings:

Play time—**DISC TTL** (disc title)

When you select **DISC TTL**, the title of the currently playing disc is shown in the display.

- If no title has been entered for the currently playing disc, **NO TITLE** is displayed. □

## Using CD TEXT functions

Some discs have certain information encoded on the disc during manufacture. These discs may contain such information as the CD title, track title, artist's name and playback time and are called CD TEXT discs. Only these specially encoded CD TEXT discs support the functions listed below.

## Displaying titles on CD TEXT discs

## ● Press DISPLAY.

Press **DISPLAY** repeatedly to switch between the following settings:

Play time—**DISC TTL** (disc title)—**ART NAME** (disc artist name)—**TRK TTL** (track title)

—**ART NAME** (track artist name)

- If specific information has not been recorded on a CD TEXT disc, **NO XXXX** will be displayed (e.g., **NO T-TTL**).

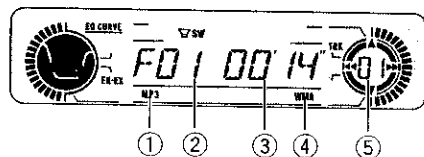
## Scrolling titles in the display

This unit can display the first 8 letters only of **DISC TTL**, **ART NAME**, **TRK TTL** and **ART NAME**. When the recorded information is longer than 8 letters, you can scroll the text to the left so that the rest of the title can be seen.

## ● Press DISPLAY and hold until the title begins to scroll to the left.

The rest of the title will appear in the display. □

## Playing MP3/WMA/WAV



These are the basic steps necessary to play an MP3/WMA/WAV with your built-in CD player. More advanced MP3/WMA/WAV operation is explained starting on page 20.

### ① MP3 indicator

Shows when the MP3 file is playing.

### ② Folder number indicator

Shows the folder number currently playing.

### ③ Play time indicator

Shows the elapsed playing time of the current track (file).

### ④ WMA indicator

Shows when the WMA file is playing.

### ⑤ Track number indicator

Shows the track (file) currently playing.

- If a track number 100 to 199 is selected, ► will light up above the last two digits of the track number.
- If a track number 200 or more is selected, ► will blink above the last two digits of the track number.

### 1 Press OPEN to open the front panel.

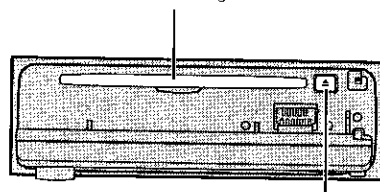
CD loading slot appears.

- After a CD-ROM has been inserted, press **SOURCE** to select the built-in CD player.

### 2 Insert a CD-ROM into the CD loading slot.

Playback will automatically start.

CD loading slot



EJECT button

- You can eject a CD-ROM by pressing **EJECT**.
- To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

### 3 Close the front panel.

### 4 Use VOLUME to adjust the sound level.

Rotate to increase or decrease the volume.

### 5 Press ▲ or ▼ to select a folder.

- You cannot select a folder that does not have an MP3/WMA/WAV file recorded in it.
- To return to folder 01 (ROOT), press and hold **BAND**. However, if folder 01 (ROOT) contains no files, playback commences with folder 02.

### 6 To perform fast forward or reverse, press and hold ◀ or ▶.

- This is fast forward and reverse operation only for the file being played. This operation is canceled when the previous or next file is reached.
- If you select the search method to **ROUGH**, pressing and holding ◀ or ▶ enables you to search every ten track in the current folder. (Refer to *Selecting the search method* on page 22.)

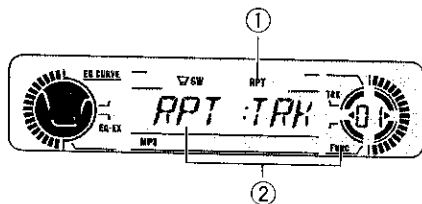
### 7 To skip back or forward to another track, press ◀ or ▶.

Pressing ► skips to the start of the next track. Pressing ◀ once skips to the start of the current track. Pressing again will skip to the previous track.

## Notes

- When playing discs with MP3/WMA/WAV files and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs, both types can be played only by switching mode between MP3/WMA/WAV and CD-DA with **BAND**.
- If you have switched between playback of MP3/WMA/WAV files and audio data (CD-DA), playback starts at the first track on the disc.
- The built-in CD player can play back an MP3/WMA/WAV file recorded on CD-ROM. (Refer to page 43 for files that can be played back.)
- Do not insert anything other than a CD into the CD loading slot.
- There is sometimes a delay between starting up playback and the sound being issued. This is particularly the case when playing back multi-session and many folders. When being read in, **FRMTREAD** is displayed.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- Playback is carried out in order of file number. Folders are skipped if they contain no files. (If folder 01 (ROOT) contains no files, playback commences with folder 02.)
- When playing back files recorded as VBR (variable bit rate) files, the play time will not be correctly displayed if fast forward or reverse operations are used.
- If the inserted disc contains no files that can be played back, **NO AUDIO** is displayed.
- If the inserted disc contains WMA files that are protected by digital rights management (DRM), **SKIPPED** is displayed while the protected file is skipped.
- If all the files on the inserted disc are secured by DRM, **PROTECT** is displayed.
- There is no sound on fast forward or reverse.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed. Refer to *Understanding built-in CD player error messages* on page 42.
- When an MP3/WMA/WAV disc is inserted, folder name and file name begin to scroll to the left automatically. ◻

## Introduction of advanced built-in CD player (MP3/WMA/WAV) operation



### ① RPT indicator

Shows when repeat range is selected to current track (file).

### ② Function display

Shows the function status.

### ● Press FUNCTION to display the function names.

Press **FUNCTION** repeatedly to switch between the following functions:

**RPT** (repeat play)—**RDM** (random play)—**SCAN** (scan play)—**PAUSE** (pause)—**COMP** (compression and BMX)—**FF/REV** (search method)—**TAG** (tag display)

■ To return to the playback display, press **BAND**.

### Note

If you do not operate the function within about 30 seconds, the display is automatically returned to the playback display.

## Repeating play

For MP3/WMA/WAV playback, there are three repeat play ranges: **FLD** (folder repeat), **TRK** (one-track repeat) and **DSC** (repeat all tracks).

### 1 Press FUNCTION to select RPT.

Press **FUNCTION** until **RPT** appears in the display.

### 2 Press ◀ or ▶ to select the repeat range.

Press ◀ or ▶ until the desired repeat range appears in the display.

- **FLD** – Repeat the current folder
- **TRK** – Repeat just the current track
- **DSC** – Repeat all tracks

### Notes

- If you select other folder during repeat play, the repeat play range changes to **DSC**.
- If you perform track search or fast forward/reverse during **TRK**, the repeat play range changes to **FLD**.
- When **FLD** is selected, it is not possible to play back a subfolder of that folder.

## Playing tracks in a random order

Random play lets you play back tracks in a random order within the repeat range, **FLD** and **DSC**.

### 1 Select the repeat range,

Refer to *Repeating play* on this page.

### 2 Press FUNCTION to select RDM.

Press **FUNCTION** until **RDM** appears in the display.

### 3 Press ▲ to turn random play on.

**RDM:ON** appears in the display. Tracks will play in a random order within the previously selected **FLD** or **DSC** ranges.

### 4 Press ▼ to turn random play off.

**RDM:OFF** appears in the display. Tracks will continue to play in order.

### Note

If you turn random play on during **FLD** and then return to the playback display, **FRDM** appears in the display.

## Scanning folders and tracks

While you are using **FLD**, the beginning of each track in the selected folder plays for about 10 seconds. When you are using **DSC**, the beginning of the first track of each folder is played for about 10 seconds.

### 1 Select the repeat range.

Refer to *Repeating play* on the previous page.

### 2 Press FUNCTION to select SCAN.

Press **FUNCTION** until **SCAN** appears in the display.

### 3 Press ▲ to turn scan play on.

**SCAN:ON** appears in the display. The first 10 seconds of each track of the current folder (or the first track of each folder) is played.

### 4 When you find the desired track (or folder) press ▼ to turn scan play off.

**SCAN:OFF** appears in the display. The track (or folder) will continue to play.

■ If the display has automatically returned to the playback display, select **SCAN** again by pressing **FUNCTION**.

### Notes

- After track or folder scanning is finished, normal playback of the tracks will begin again.
- If you turn scan play on during **FLD** and then return to the playback display, **FSCN** appears in the display.

## Pausing MP3/WMA/WAV playback

Pause lets you temporarily stop playback of the MP3/WMA/WAV.

### 1 Press FUNCTION to select PAUSE.

Press **FUNCTION** until **PAUSE** appears in the display.

### 2 Press ▲ to turn pause on.

**PAUSE:ON** appears in the display. Play of the current track pauses.

### 3 Press ▼ to turn pause off.

**PAUSE:OFF** appears in the display. Play will resume at the same point that you turned pause on.

## Using compression and BMX

Using the **COMP** (compression) and **BMX** functions let you adjust the sound playback quality of the CD player. Each of the functions have a two-step adjustment. The **COMP** function balances the output of louder and softer sounds at higher volumes. **BMX** controls sound reverberations to give playback a fuller sound. Listen to each of the effects as you select through them and use the one that best enhances the playback of the track or CD that you are listening to.

### 1 Press FUNCTION to select COMP.

Press **FUNCTION** until **COMP** appears in the display.

### 2 Press ▲ or ▼ to select your favorite setting.

Press ▲ or ▼ repeatedly to switch between the following settings:

**COMP OFF**—**COMP 1**—**COMP 2**—**COMP OFF**—**BMX 1**—**BMX 2**

## Selecting the search method

You can switch the search method between fast forward/reverse and searching every 10 track.


### 1 Press FUNCTION to select FF/REV.

Press **FUNCTION** until **FF/REV** appears in the display.

- If the search method **ROUGH** has been previously selected, **ROUGH** will be displayed.

### 2 Press ◀ or ▶ to select the search method.

Press ◀ or ▶ until the desired search method appears in the display.

- **FF/REV** – Fast forward and reverse
- **ROUGH** – Searching every 10 track 


## Searching every 10 track in the current folder

If the current folder contains over 10 tracks, you can search every 10 track. When the one folder contains a lot of tracks, you can roughly search the track you want to play.

### 1 Select the search method **ROUGH**.

Refer to *Selecting the search method* on this page.

### 2 Press and hold ◀ or ▶ to search every 10 track in the current folder.

- If the current folder contains less than 10 tracks, pressing and holding ▶ recalls the last track of the folder. Also, if the remaining number of tracks after searching every 10 tracks are less than 10, pressing and holding ▶ recalls the last track of the folder.
- If the current folder contains less than 10 tracks, pressing and holding ◀ recalls the first track of the folder. Also, if the remaining number of tracks after searching every 10 tracks are less than 10, pressing and holding ◀ recalls the first track of the folder. 

## Switching the tag display

It is possible to turn the tag display on or off, if MP3/WMA disc contains the text information such as track title and artist name.

- If you turn the tag display off, time to playback will be shorter than when this function is turned on.

### 1 Press FUNCTION to select TAG.

Press **FUNCTION** until **TAG** appears in the display.

### 2 Press ▲ to turn tag display on.


**TAG:ON** appears in the display.

### 3 Press ▼ to turn tag display off.

**TAG:OFF** appears in the display.



#### Note

When you turn the tag display on, this unit returns to the beginning of the current track in order to read the text information. 

## Displaying text information on MP3/WMA/WAV disc

Text information recorded on an MP3/WMA/WAV disc can be displayed.

### When playing back an MP3/WMA disc

#### ● Press DISPLAY.

Press **DISPLAY** repeatedly to switch between the following settings:

Play time—**FOLDER** (folder name)—**FILE** (file name)—**TRK TTL** (track title)—**ART NAME** (artist name)—**ALBM TTL** (album title)—**COMMENT** (comment)—Bit rate

- When playing back MP3 files recorded as VBR (variable bit rate) files, the bit rate value is not displayed even after switching to bit rate.

- When playing back WMA files recorded as VBR (variable bit rate) files, the average bit rate value is displayed.

- When you have turned tag display off, you cannot switch to **TRK TTL**, **ART NAME**, **ALBM TTL** and **COMMENT**.

- If specific information has not been recorded on an MP3/WMA disc, **NO XXXX** will be displayed (e.g., **NO NAME**).

- With some applications used to encode WMA files, album names and other text information may not be correctly displayed.


### When playing back a WAV disc

#### ● Press DISPLAY.

Press **DISPLAY** repeatedly to switch between the following settings:

Play time—**FOLDER** (folder name)—**FILE** (file name)—sampling frequency

- If specific information has not been recorded on a WAV disc, **NO XXXX** will be displayed (e.g., **NO NAME**).

- You can only play back WAV files in the frequencies 16, 22.05, 24, 32, 44.1 and 48 kHz (LPCM), or 22.05 and 44.1 kHz (MS ADPCM). The sampling frequency shown in the display may be rounded. 

### Scrolling text information in the display

This unit can display the first 8 letters only of **FOLDER**, **FILE**, **TRK TTL**, **ART NAME**, **ALBM TTL** and **COMMENT**. When the recorded information is longer than 8 letters, you can scroll the text to the left so that the rest of the text information can be seen.

#### ● Press DISPLAY and hold until the text information begins to scroll to the left.

The rest of the text information will appear in the display.

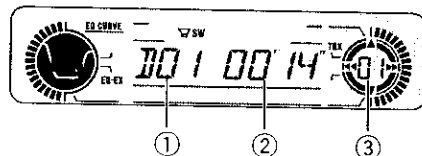


#### Note

Unlike MP3 and WMA file format, WAV files display only **FOLDER** and **FILE**. 



## Playing a CD



You can use this unit to control a multi-CD player, which is sold separately.

These are the basic steps necessary to play a CD with your multi-CD player. More advanced CD operation is explained starting on the next page.

### ① Disc number indicator

Shows the disc currently playing.

### ② Play time indicator

Shows the elapsed playing time of the current track.

### ③ Track number indicator

Shows the track currently playing.

### 1 Press SOURCE to select the multi-CD player.

Press **SOURCE** until you see **MULTI CD** displayed.

### 2 Use VOLUME to adjust the sound level.

Rotate to increase or decrease the volume.

### 3 Select a disc you want to listen to with the 1-6 buttons.

For discs located at 1 to 6, press the corresponding number button.

If you want to select a disc located at 7 to 12, press and hold the corresponding numbers such as **1** for disc 7, until the disc number appears in the display.

■ You can also sequentially select a disc by pressing **▲/▼**.

### 4 To perform fast forward or reverse, press and hold ◀ or ▶.

### 5 To skip back or forward to another track, press ◀ or ▶.

Pressing **▶** skips to the start of the next track. Pressing **◀** once skips to the start of the current track. Pressing again will skip to the previous track.

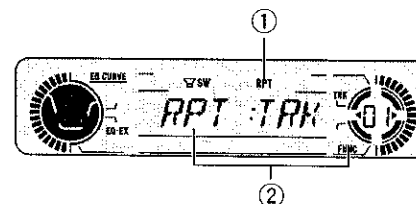
### Notes

- When the multi-CD player performs the preparatory operations, **READY** is displayed.
- If the multi-CD player does not operate properly, an error message such as **ERROR-11** may be displayed. Refer to the multi-CD player owner's manual.
- If there are no discs in the multi-CD player magazine, **NO DISC** is displayed.
- When you select a CD TEXT disc on a CD TEXT compatible multi-CD player, the disc and track titles begin to scroll to the left automatically.

## 50-disc multi-CD player

Only those functions described in this manual are supported for 50-disc multi-CD players.

## Introduction of advanced multi-CD player operation



### ① RPT indicator

Shows when repeat range is selected to current track.

### ② Function display

Shows the function status.

### ● Press FUNCTION to display the function names.

Press **FUNCTION** repeatedly to switch between the following functions:

**RPT** (repeat play)—**LIST** (disc title list)—**RDM** (random play)—**SCAN** (scan play)—**ITS-P** (ITS play)—**PAUSE** (pause)—**COMP** (compression and DBE)

■ To return to the playback display, press **BAND**.

### Note

If you do not operate the function within about 30 seconds, the display is automatically returned to the playback display.

## Repeating play

There are three repeat play ranges for the multi-CD player: **MCD** (multi-CD player repeat), **TRK** (one-track repeat) and **DSC** (disc repeat).

### 1 Press FUNCTION to select RPT.

Press **FUNCTION** until **RPT** appears in the display.

### 2 Press ◀ or ▶ to select the repeat range.

Press **◀** or **▶** until the desired repeat range appears in the display.

- **MCD** – Repeat all discs in the multi-CD player
- **TRK** – Repeat just the current track
- **DSC** – Repeat the current disc

### Notes

- If you select other discs during repeat play, the repeat play range changes to **MCD**.
- If you perform track search or fast forward/reverse during **TRK**, the repeat play range changes to **DSC**.

## Playing tracks in a random order

Random play lets you play back tracks in a random order within the repeat range, **MCD** and **DSC**.

### 1 Select the repeat range.

Refer to *Repeating play* on this page.

### 2 Press FUNCTION to select RDM.

Press **FUNCTION** until **RDM** appears in the display.

### 3 Press ▲ to turn random play on.

**RDM:ON** appears in the display. Tracks will play in a random order within the previously selected **MCD** or **DSC** ranges.

### 4 Press ▼ to turn random play off.

**RDM:OFF** appears in the display. Tracks will continue to play in order.



## Note

If you turn random play on during **DSC** and then return to the playback display, **DRDM** appears in the display.

## Scanning CDs and tracks

While you are using **DSC**, the beginning of each track on the selected disc plays for about 10 seconds. When you are using **MCD**, the beginning of the first track of each disc is played for about 10 seconds.

## 1 Select the repeat range.

Refer to *Repeating play* on the previous page.

2 Press **FUNCTION** to select **SCAN**.

Press **FUNCTION** until **SCAN** appears in the display.

3 Press **▲** to turn scan play on.

**SCAN:ON** appears in the display. The first 10 seconds of each track of the current disc (or the first track of each disc) is played.

4 When you find the desired track (or disc) press **▼** to turn scan play off.

**SCAN:OFF** appears in the display. The track (or disc) will continue to play.

- If the display has automatically returned to the playback display, select **SCAN** again by pressing **FUNCTION**.



## Notes

- After track or disc scanning is finished, normal playback of the tracks will begin again.
- If you turn scan play on during **DSC** and then return to the playback display, **DSCN** appears in the display.

## Pausing CD playback

Pause lets you temporarily stop playback of the CD.

1 Press **FUNCTION** to select **PAUSE**.

Press **FUNCTION** until **PAUSE** appears in the display.

2 Press **▲** to turn pause on.

**PAUSE:ON** appears in the display. Play of the current track pauses.

3 Press **▼** to turn pause off.

**PAUSE:OFF** appears in the display. Play will resume at the same point that you turned pause on.

## Using ITS playlists

ITS (instant track selection) lets you make a playlist of favorite tracks from those in the multi-CD player magazine. After you have added your favorite tracks to the playlist you can turn on ITS play and play just those selections.

## Creating a playlist with ITS programming

You can use ITS to enter and playback up to 99 tracks per disc, up to 100 discs (with the disc title). (With multi-CD players sold before the CDX-P1250 and CDX-P650, up to 24 tracks can be stored in the playlist.)

## 1 Play a CD that you want to program.

Press **▲** or **▼** to select a CD.

2 Press **FUNCTION** and hold until **TITLE IN** appears in the display, then press **FUNCTION** to select **ITS**.

After **TITLE IN** is displayed, press **FUNCTION** repeatedly, the following functions appear in the display:

**TITLE IN** (disc title input)—**ITS** (ITS programming)

3 Select a desired track by pressing **◀** or **▶**.4 Press **▲** to store the currently playing track in the playlist.

**ITS IN** is displayed briefly and the currently playing selection is added to your playlist. The display then shows **ITS** again.

5 Press **BAND** to return to the playback display.

## Note

After data for 100 discs has been stored in memory, data for a new disc will overwrite the oldest one.

## Playback from your ITS playlist

ITS play lets you listen to the tracks that you have entered into your ITS playlist. When you turn on ITS play, tracks from your ITS playlist in the multi-CD player will begin to play.

## 1 Select the repeat range.

Refer to *Repeating play* on page 25.

2 Press **FUNCTION** to select **ITS-P**.

Press **FUNCTION** until **ITS-P** appears in the display.

3 Press **▲** to turn ITS play on.

**ITS-P:ON** appears in the display. Playback begins of those tracks from your playlist within the previously selected **MCD** or **DSC** ranges.

- If no tracks in the current range are programmed for ITS play then **EMPTY** is displayed.

4 Press **▼** to turn ITS play off.

**ITS-P:OFF** appears in the display. Playback will continue in normal order from the currently playing track and CD.

## Erasing a track from your ITS playlist

When you want to delete a track from your ITS playlist, you can if ITS play is on.

If ITS play is already on, skip to step 2. If ITS play is not already on, press **FUNCTION**.

## 1 Play a CD you want to delete a track from your ITS playlist, and turn ITS play on.

Refer to *Playback from your ITS playlist* on this page.

2 Press **FUNCTION** and hold until **TITLE IN** appears in the display, then press **FUNCTION** to select **ITS**.

After **TITLE IN** is displayed, press **FUNCTION** until **ITS** appears in the display.

3 Select a desired track by pressing **◀** or **▶**.4 Press **▼** to erase a track from your ITS playlist.

The currently playing selection is erased from your ITS playlist and playback of the next track from your ITS playlist begins.

- If there are no tracks from your playlist in the current range, **EMPTY** is displayed and normal play resumes.

5 Press **BAND** to return to the playback display.

## Multi-CD Player

## Erasing a CD from your ITS playlist

When you want to delete all tracks of a CD from your ITS playlist, you can if ITS play is off.

## 1 Play a CD that you want to delete.

Press ▲ or ▼ to select a CD.

## 2 Press FUNCTION and hold until TITLE IN appears in the display, then press FUNCTION to select ITS.

After TITLE IN is displayed, press FUNCTION until ITS appears in the display.

## 3 Press ▼ to erase all tracks on the currently playing CD from your ITS playlist.

All tracks on the currently playing CD are erased from your playlist and ITS CLR is displayed.

## 4 Press BAND to return to the playback display. [ ]

## Using disc title functions

You can input CD titles and display the title. Then you can easily search for and select a desired disc for play.

## Entering disc titles

Disc title input lets you input CD titles up to 8 letters long and up to 100 disc titles (with ITS playlist) into the multi-CD player.

## 1 Play a CD that you want to enter the title.

Press ▲ or ▼ to select a CD.

## 2 Press FUNCTION and hold until TITLE IN appears in the display.

After TITLE IN is displayed, press FUNCTION repeatedly, the following functions appear in the display:

**TITLE IN** (disc title input)—**ITS** (ITS programming)

■ When playing a CD TEXT disc on a CD TEXT compatible multi-CD player, you cannot switch to **TITLE IN**. The disc title will have already been recorded on a CD TEXT disc.

## 3 Press ▲ or ▼ to select a letter of the alphabet.

Each press of ▲ will display a letter of the alphabet in **A B C ... X Y Z**, numbers and symbols in **1 2 3 ... > [ ]** order. Each press of ▼ will display a letter in the reverse order, such as **Z Y X ... C B A** order.



## 4 Press ► to move the cursor to the next character position.

When the letter you want is displayed, press ► to move the cursor to the next position and then select the next letter. Press ◀ to move backwards in the display.

## 5 Move the cursor to the last position by pressing ► after entering the title.

When you press ► one more time, the entered title is stored in memory.

## 6 Press BAND to return to the playback display.

## Notes

- Titles remain in memory, even after the disc has been removed from the magazine, and are recalled when the disc is reinserted.
- After data for 100 discs has been stored in memory, data for a new disc will overwrite the oldest one.

## Multi-CD Player

## Displaying disc titles

You can display the title of any disc that has had a disc title entered.

## ● Press DISPLAY.

Press **DISPLAY** repeatedly to switch between the following settings:

Play time—**DISC TTL** (disc title)

When you select **DISC TTL**, the title of the currently playing disc is shown in the display.

■ If no title has been entered for the currently playing disc, **NO TITLE** is displayed.

## Selecting discs from the disc title list

Disc title list lets you see the list of disc titles that have been entered into the multi-CD player and select one of them to playback.

## 1 Press FUNCTION to select LIST.

Press **FUNCTION** until **LIST** appears in the display.

## 2 Press ◀ or ► to scroll through the list of titles that have been entered.

■ If no title has been entered for a disc, title is not displayed.

## 3 Press ▲ to play your favorite CD title.

That selection will begin to play. [ ]

## Using CD TEXT functions

You can use these functions only with a CD TEXT compatible multi-CD player.

Some discs have certain information encoded on the disc during manufacture. These discs may contain such information as the CD title, track title, artist's name and playback time and are called CD TEXT discs. Only these spe-

cially encoded CD TEXT discs support the functions listed below.

## Displaying titles on CD TEXT discs

## ● Press DISPLAY.

Press **DISPLAY** repeatedly to switch between the following settings:

Play time—**DISC TTL** (disc title)—**ART NAME** (disc artist name)—**TRK TTL** (track title)

—**ART NAME** (track artist name)

■ If specific information has not been recorded on a CD TEXT disc, **NO XXXX** will be displayed (e.g., **NO T-TTL**).

## Scrolling titles in the display

This unit can display the first 8 letters only of **DISC TTL**, **ART NAME**, **TRK TTL** and **ART NAME**. When the recorded information is longer than 8 letters, you can scroll the text to the left so that the rest of the title can be seen.

## ● Press DISPLAY and hold until the title begins to scroll to the left.

The rest of the title will appear in the display. [ ]

## Using compression and bass emphasis

You can use these functions only with a multi-CD player that supports them.

## Multi-CD Player

Using the COMP (compression) and DBE (dynamic bass emphasis) functions let you adjust the sound playback quality of the multi-CD player. Each of the functions have a two-step adjustment. The COMP function balances the output of louder and softer sounds at higher volumes. DBE boosts bass levels to give playback a fuller sound. Listen to each of the effects as you select through them and use the one that best enhances the playback of the track or CD that you are listening to.

### 1 Press FUNCTION to select COMP.

Press **FUNCTION** until **COMP** appears in the display.

- If the multi-CD player does not support COMP/DBE, **NO COMP** is displayed when you attempt to select it.

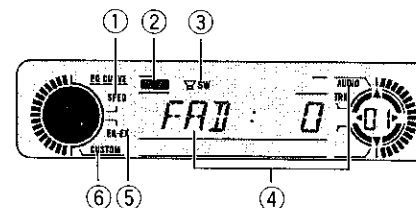
### 2 Press ▲ or ▼ to select your favorite setting.

Press ▲ or ▼ repeatedly to switch between the following settings:

**COMP OFF—COMP 1—COMP 2—  
COMP OFF—DBE 1—DBE 2** [RECALL]

## Audio Adjustments

### Introduction of audio adjustments



#### ① SFEQ indicator

Appears in the display when SFEQ function can be activated.

#### ② Loudness indicator

Appears in the display when loudness is turned on.

#### ③ SW indicator

Shows when the subwoofer output is turned on.

#### ④ Audio display

Shows the audio adjustments status.

#### ⑤ EQ-EX indicator

Appears in the display when EQ-EX function can be activated.

#### ⑥ CUSTOM indicator

Shows when custom equalizer curve is currently selected.

### ● Press AUDIO to display the audio function names.

Press **AUDIO** repeatedly to switch between the following audio functions:

**FAD** (balance adjustment)—**EQ** (equalizer curve adjustment)—**B** (bass and treble level adjustment)—**LOUD** (loudness)—**SUB, W** (subwoofer on/off setting)/**NOFAD** (non fading output on/off setting)—**80: 0** (subwoofer setting)/**NOFAD** (non fading output setting)

—**HPF** (high pass filter)—**SLA** (source level adjustment)

- If EQ-EX function has been selected and only when EQ-EX is turned on and **CUSTOM** is selected as the equalizer curve, you can switch to **B**.
- When the subwoofer controller setting is only **P/O:FUL**, you cannot switch to **SUB, W**. (Refer to page 39.)
- You can select the **80: 0** only when subwoofer output is turned on in the **SUB, W**.
- When the subwoofer controller setting is only **P/O:FUL**, you can switch to the non fading output on/off setting. (Refer to page 39.)
- You can select the non fading output setting only when non fading output is turned on in the non fading output on/off setting.
- When selecting the FM tuner as the source, you cannot switch to **SLA**.
- To return to the display of each source, press **BAND**.



#### Note

If you do not operate the audio function within about 30 seconds, the display is automatically returned to the source display. [RECALL]

## Compensating for equalizer curves (EQ-EX)

The EQ-EX function smoothes the effects of each equalizer curve. Furthermore, you can adjust bass and treble for each source when **CUSTOM** curve is selected.

- If SFEQ has been previously selected, press **EQ-EX** and hold to switch to EQ-EX and **EQ-EX** appears in the display.

### ● Press EQ-EX to turn EQ-EX on.

**EQ-EX:ON** appears in the display. EQ-EX is now on.

- To turn EQ-EX off, press **EQ-EX**. [RECALL]



## Audio Adjustments

### Setting the sound focus equalizer (SFEQ)

Clarifying the sound image of vocals and instruments allows the simple staging of a natural, pleasant sound environment. Even greater listening enjoyment will be obtained if seating positions are chosen carefully. **FRT1** boosts the treble on the front output and the bass on the rear output. **FRT2** boosts the treble and the bass on the front output and the bass on the rear output. (The bass boost is the same for both front and rear.) For both **FRT1** and **FRT2**, **H** setting provides a more pronounced effect than **L** setting.

#### 1 Press EQ-EX and hold to switch to SFEQ function.

Press **EQ-EX** and hold until **SFEQ** indicator appears in the display.

- To switch to EQ-EX function, press **EQ-EX** and hold.

#### 2 Press EQ-EX to select the desired SFEQ setting.

Press **EQ-EX** repeatedly to switch between the following settings:

**FRT1-H** (front 1-high)—**FRT1-L** (front 1-low)  
—**FRT2-H** (front 2-high)—**FRT2-L** (front 2-low)  
—**CUSTOM** (custom)—**SFEQ OFF** (off)


#### 3 Press ◀ or ▶ to select the desired position.

Press ◀ or ▶ until the desired position appears in the display.

**L** (left)—**C** (center)—**R** (right)

#### Notes

- If you adjust the bass or treble, **CUSTOM** memorizes an SFEQ setting in which the bass and treble are adjusted for personal preference.
- If you switch the SFEQ setting, the HPF function is automatically turned off. By turning the

HPF function on after selecting the SFEQ setting, you can combine HPF function with SFEQ function. 

### Using balance adjustment

You can select a fader/balance setting that provides an ideal listening environment in all occupied seats.

#### 1 Press AUDIO to select FAD.

Press **AUDIO** until **FAD** appears in the display.

- If the balance setting has been previously adjusted, **BAL** will be displayed.


#### 2 Press ▲ or ▼ to adjust front/rear speaker balance.

Each press of ▲ or ▼ moves the front/rear speaker balance towards the front or the rear. **FAD:F15** – **FAD:R15** is displayed as the front/rear speaker balance moves from front to rear.

- FAD:0** is the proper setting when only two speakers are used.

- When the rear output setting is **R-SP:S/W**, you cannot adjust front/rear speaker balance. Refer to *Setting the rear output and subwoofer controller* on page 39.

#### 3 Press ◀ or ▶ to adjust left/right speaker balance.

When you press ◀ or ▶, **BAL:0** is displayed. Each press of ◀ or ▶ moves the left/right speaker balance towards the left or the right. **BAL:L9** – **BAL:R9** is displayed as the left/right speaker balance moves from left to right. 

## Audio Adjustments

### Using the equalizer

The equalizer lets you adjust the equalization to match car interior acoustic characteristics as desired.

### Recalling equalizer curves

There are six stored equalizer curves which you can easily recall at any time. Here is a list of the equalizer curves:

Display	Equalizer curve
<b>SPR-BASS</b>	Super bass
<b>POWERFUL</b>	Powerful
<b>NATURAL</b>	Natural
<b>VOCAL</b>	Vocal
<b>CUSTOM</b>	Custom
<b>EQ FLAT</b>	Flat

- CUSTOM** is an adjusted equalizer curve that you create.
- A separate **CUSTOM** curve can be created for each source. (The built-in CD player and the multi-CD player are set to the same equalizer adjustment setting automatically.) If you make adjustments, the equalizer curve settings will be memorized in **CUSTOM**.
- When **EQ FLAT** is selected no supplement or correction is made to the sound. This is useful to check the effect of the equalizer curves by switching alternatively between **EQ FLAT** and a set equalizer curve.

#### ● Press EQ to select the equalizer.

Press **EQ** repeatedly to switch between the following equalizers:

**SPR-BASS**—**POWERFUL**—**NATURAL**—**VOCAL**—**CUSTOM**—**EQ FLAT**

### Adjusting equalizer curves

You can adjust the currently selected equalizer curve setting as desired. Adjusted equalizer curve settings are memorized in **CUSTOM**.

#### 1 Press AUDIO to select EQ.

Press **AUDIO** until **EQ** appears in the display.

#### 2 Press ◀ or ▶ to select the equalizer band to adjust.

Each press of ◀ or ▶ selects equalizer bands in the following order:

**EQ-L** (low)—**EQ-M** (mid)—**EQ-H** (high)

#### 3 Press ▲ or ▼ to adjust the level of the equalizer band.

Each press of ▲ or ▼ increases or decreases the level of the equalization band.

**+6** – **–6** is displayed as the level is increased or decreased.

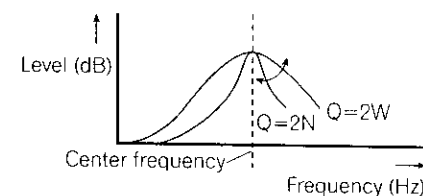
- You can then select another band and adjust the level.

#### Note

If you make adjustments, **CUSTOM** curve is updated.

### Fine adjusting equalizer curve

You can adjust the center frequency and the Q factor (curve characteristics) of each currently selected curve band (**EQ-L**/**EQ-M**/**EQ-H**).



#### 1 Press AUDIO and hold until frequency and the Q factor (e.g., F-80:Q1W) appears in the display.

## Audio Adjustments

**2 Press AUDIO to select the band for adjustment from among low, mid and high.** Press **AUDIO** repeatedly to switch between the following functions:

Low—Mid—High—**B** (bass adjustment)—**T** (treble adjustment)

■ If EQ-EX function has been selected and only when EQ-EX is turned on and **CUSTOM** is selected as the equalizer curve, you can switch to **B** and **T**.

**3 Press ◀ or ▶ to select the desired frequency.**

Press ◀ or ▶ until the desired frequency appears in the display.

Low: **40—80—100—160** (Hz)

Mid: **200—500—1k—2k** (Hz)

High: **3k—8k—10k—12k** (Hz)

**4 Press ▲ or ▼ to select the desired Q factor.**

Press ▲ or ▼ until the desired Q factor appears in the display.

**2N—1N—1W—2W**



### Note

If you make adjustments, **CUSTOM** curve is updated.

## Adjusting bass and treble

You can adjust bass and treble settings.

- If EQ-EX function has been selected and only when EQ-EX is turned on and **CUSTOM** is selected as the equalizer curve, you can adjust bass and treble settings.
- If SFEQ has been set to **FRT1**, bass adjustment affects only the rear output: front output cannot be adjusted.

- If SFEQ has been set to **FRT1** or **FRT2**, treble adjustment affects only the front output: rear output cannot be adjusted.

## Adjusting bass and treble level

You can adjust the bass and treble level.

**1 Press AUDIO to select B.**

Press **AUDIO** until **B** appears in the display.

■ If the treble level has been previously adjusted, **T** will be displayed.

**2 Press ◀ or ▶ to select bass or treble.**

Press ◀ and **B** is displayed. Press ▶ and **T** is displayed.

**3 Press ▲ or ▼ to adjust the level.**

Each press of ▲ or ▼ increases or decreases the selected bass or treble level. **+6—-6** is displayed as the level is increased or decreased.

## Selecting bass frequency

You can select the bass frequency for level adjustment.

**1 Press AUDIO and hold until frequency and the Q factor (e.g., F- 80:Q1W) appears in the display.**

**2 Press AUDIO to select B.**

Press **AUDIO** until **B** appears in the display.

**3 Press ◀ or ▶ to select the desired frequency.**

Press ◀ or ▶ until the desired frequency appears in the display.

**40—63—100—160** (Hz)

## Audio Adjustments

### Selecting treble frequency

You can select the treble frequency for level adjustment.

**1 Press AUDIO and hold until frequency and the Q factor (e.g., F- 80:Q1W) appears in the display.**

**2 Press AUDIO to select T.**

Press **AUDIO** until **T** appears in the display.

**3 Press ◀ or ▶ to select the desired frequency.**

Press ◀ or ▶ until the desired frequency appears in the display.

**2k—4k—6k—10k** (Hz)

## Adjusting loudness

Loudness compensates for deficiencies in the low- and high-sound ranges at low volume.

**1 Press AUDIO to select LOUD.**

Press **AUDIO** until **LOUD** appears in the display.

**2 Press ▲ to turn loudness on.**

Loudness level (e.g., **LOUD:MID**) appears in the display.

**3 Press ◀ or ▶ to select a desired level.**

Each press of ◀ or ▶ selects level in the following order:

**LOW** (low)—**MID** (mid)—**HI** (high)

**4 Press ▼ to turn loudness off.**

**LOUD:OFF** appears in the display.

## Using subwoofer output

This unit is equipped with a subwoofer output which can be turned on or off.

**1 Press AUDIO to select SUB, W.**

Press **AUDIO** until **SUB, W** appears in the display.

■ When the subwoofer controller setting is **P/O:FUL**, you cannot select **SUB, W**.

**2 Press ▲ to turn subwoofer output on.**

**SUB, W:NOR** appears in the display. Subwoofer output is now on.

■ If the subwoofer output phase has been set to the reverse, **SUB, W:REV** will be displayed.

■ To turn subwoofer output off, press ▼.

**3 Press ◀ or ▶ to select the phase of subwoofer output.**

Press ◀ to select reverse phase and **REV** appears in the display. Press ▶ to select normal phase and **NOR** appears in the display.

## Adjusting subwoofer settings

When the subwoofer output is on, you can adjust the cut-off frequency and the output level of the subwoofer.

**1 Press AUDIO to select 80: 0.**

Press **AUDIO** until **80: 0** appears in the display.

■ When the subwoofer output is on, you can select **80: 0**.

■ If the subwoofer setting has been previously adjusted, the frequency of that previously selected will be displayed instead of **80**.

**2 Press ◀ or ▶ to select cut-off frequency.**

Each press of ◀ or ▶ selects cut-off frequencies in the following order:

**50—80—125** (Hz)

Only frequencies lower than those in the selected range are output from the subwoofer.

### 3 Press ▲ or ▼ to adjust the output level of the subwoofer.

Each press of ▲ or ▼ increases or decreases the level of the subwoofer. **+6 – -6** is displayed as the level is increased or decreased.

## Using non fading output

When the non fading output setting is on, the audio signal does not pass through this unit's low pass filter (for the subwoofer), but is output through the RCA output.

### 1 Press AUDIO to select non fading output on/off setting.

Press **AUDIO** until **NOFAD:ON** appears in the display.

▪ When the subwoofer controller setting is only **P/O:FUL**, you can switch to the non fading output on/off setting. (Refer to page 39.)

### 2 Press ▲ to turn non fading output on.

**NOFAD:ON** appears in the display. Non fading output is now on.

▪ To turn non fading output off, press ▼.

## Adjusting non fading output level

When the non fading output is on, you can adjust the level of non fading output.

### 1 Press AUDIO to select non fading output setting.

Press **AUDIO** until **NOFAD: 0** appears in the display.

### 2 Press ▲ or ▼ to adjust the output level of the non fading.

Each press of ▲ or ▼ increases or decreases the level of the non fading. **+6 – -6** is displayed as the level is increased or decreased.

## Using the high pass filter

When you do not want low sounds from the subwoofer output frequency range to play from the front or rear speakers, turn the HPF (high pass filter) on. Only frequencies higher than those in the selected range are output from the front or rear speakers.

### 1 Press AUDIO to select HPF.

Press **AUDIO** until **HPF** appears in the display.

### 2 Press ▲ to turn high pass filter on.

**HPF: 80** appears in the display. High pass filter is now on.

▪ If the high pass filter has been previously adjusted, the frequency of that previously selected will be displayed instead of **HPF: 80**.  
▪ To turn high pass filter off, press ▼.

### 3 Press ◀ or ▶ to select cut-off frequency.

Each press of ◀ or ▶ selects cut-off frequencies in the following order:

**50—80—125 (Hz)**

Only frequencies higher than those in the selected range are output from the front or rear speakers.



#### Note

If you switch the SFEQ setting, the HPF function is automatically turned off. By turning the HPF function on after selecting the SFEQ setting, you can combine HPF function with SFEQ function.

## Adjusting source levels

SLA (source level adjustment) lets you adjust the volume level of each source to prevent radical changes in volume when switching between sources.

• Settings are based on the FM tuner volume level, which remains unchanged.

### 1 Compare the FM tuner volume level with the level of the source you wish to adjust.

### 2 Press AUDIO to select SLA.

Press **AUDIO** until **SLA** appears in the display.

### 3 Press ▲ or ▼ to adjust the source volume.

Each press of ▲ or ▼ increases or decreases the source volume.

**SLA: +4 – SLA: -4** is displayed as the source volume is increased or decreased.

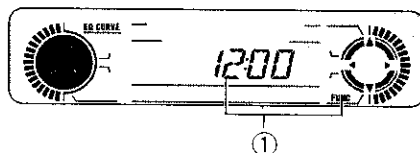


#### Notes

- Since the FM tuner volume is the control, it is not possible to apply source level adjustments to the FM tuner.
- The AM tuner volume level can also be adjusted with source level adjustments.
- The built-in CD player and the multi-CD player are set to the same source level adjustment volume automatically.
- External unit 1 and external unit 2 are set to the same source level adjustment volume automatically.

## Initial Settings

## Adjusting initial settings



Initial settings lets you perform initial set up of different settings for this unit.

① **Function display**

Shows the function status.

**1 Press SOURCE and hold until the unit turns off.**

**2 Press FUNCTION and hold until the clock appears in the display.**

**3 Press FUNCTION to select one of the initial settings.**

Press **FUNCTION** repeatedly to switch between the following settings:

Clock—**FM** (FM tuning step)—**AM** (AM tuning step)—**WARN** (warning tone)—**AUX** (auxiliary input)—**DIMMR** (dimmer)—**R-SP** (rear output and subwoofer controller)—**TEL** (telephone)

Use the following instructions to operate each particular setting.

- To cancel initial settings, press **BAND**.
- You can also cancel initial settings by holding down **FUNCTION** until the unit turns off.

## Setting the clock

Use these instructions to set the clock.

**1 Press FUNCTION to select clock.**

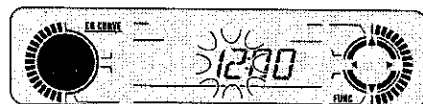
Press **FUNCTION** repeatedly until clock appears in the display.

**2 Press ◀ or ▶ to select the segment of the clock display you wish to set.**

Pressing ◀ or ▶ will select one segment of the clock display:

Hour—Minute

As you select segments of the clock display the segment selected will blink.



**3 Press ▲ or ▼ to set the clock.**

Pressing ▲ will increase the selected hour or minute. Pressing ▼ will decrease the selected hour or minute.

## Setting the FM tuning step

The FM tuning step employed by seek tuning can be switched between 100 kHz, the preset step, and 50 kHz.

**1 Press FUNCTION to select FM.**

Press **FUNCTION** repeatedly until **FM** appears in the display.

**2 Press ◀ or ▶ to select the FM tuning step.**

Pressing ◀ or ▶ will switch the FM tuning step between 100 kHz and 50 kHz. The selected FM tuning step will appear in the display.



## Note

If seek tuning is performed in 50 kHz steps, stations may be tuned in imprecisely. Tune in the stations with manual tuning or use seek tuning again.

## Initial Settings

## Setting the AM tuning step

The AM tuning step can be switched between 9 kHz, the preset step, and 10 kHz. When using the tuner in North, Central or South America, reset the tuning step from 9 kHz (531 – 1,602 kHz allowable) to 10 kHz (530 – 1,640 kHz allowable).

**1 Press FUNCTION to select AM.**

Press **FUNCTION** repeatedly until **AM** appears in the display.

**2 Press ◀ or ▶ to select the AM tuning step.**

Pressing ◀ or ▶ will switch the AM tuning step between 9 kHz and 10 kHz. The selected AM tuning step will appear in the display.

## Switching the warning tone

If the front panel is not detached from the head unit within five seconds of turning off the ignition, a warning tone will sound. You can turn off the warning tone.

**1 Press FUNCTION to select WARN.**

Press **FUNCTION** repeatedly until **WARN** appears in the display.

**2 Press ▲ or ▼ to turn WARN on or off.**

Pressing ▲ or ▼ will turn **WARN** on or off and that status will be displayed (e.g., **WARN:ON**).

## Switching the auxiliary setting

It is possible to use auxiliary equipment with this unit. Activate the auxiliary setting when using auxiliary equipment connected to this unit.

**1 Press FUNCTION to select AUX.**

Press **FUNCTION** repeatedly until **AUX** appears in the display.

**2 Press ▲ or ▼ to turn AUX on or off.**

Pressing ▲ or ▼ will turn **AUX** on or off and that status will be displayed (e.g., **AUX:ON**).

## Switching the dimmer setting

To prevent the display from being too bright at night, the display is automatically dimmed when the car's headlights are turned on. You can turn dimmer on or off.

**1 Press FUNCTION to select DIMMR.**

Press **FUNCTION** repeatedly until **DIMMR** appears in the display.

**2 Press ▲ or ▼ to turn DIMMR on or off.**

Pressing ▲ or ▼ will turn **DIMMR** on or off and that status will be displayed (e.g., **DIMMR:ON**).

## Setting the rear output and subwoofer controller

This unit's rear output (rear speaker leads output) can be used for full-range speaker (**R-SP:FUL**) or subwoofer (**R-SP:S/W**) connection. If you switch the rear output setting to the **R-SP:S/W**, you can connect a rear speaker lead directly to a subwoofer without using an auxiliary amp.

Initially, the unit is set for rear full-range speaker connection (**R-SP:FUL**). When rear output are connected to full range speakers (when **R-SP:FUL** is selected), you can connect the RCA subwoofer output to a subwoofer. In this case, you can select whether to use the subwoofer controller's (low pass filter, phase) built-in **P/O:S/W** or the auxiliary **P/O:FUL**.

### 1 Press **FUNCTION** to select **R-SP**.

Press **FUNCTION** repeatedly until **R-SP** appears in the display.

### 2 Press **▲** or **▼** to switch the rear output setting.


Pressing **▲** or **▼** will switch between **R-SP:FUL** (full-range speaker) and **R-SP:S/W** (subwoofer) and that status will be displayed.

- When no subwoofer is connected to the rear output, select **R-SP:FUL**.
- When a subwoofer is connected to the rear output, set for subwoofer **R-SP:S/W**.
- When the rear output setting is **R-SP:S/W**, you cannot change the subwoofer controller.

### 3 Press **◀** or **▶** to switch the subwoofer output or non fading output.

Pressing **◀** or **▶** will switch between **P/O:S/W** and **P/O:FUL** and that status will be displayed.

#### Notes

- Even if you change this setting, there is no output unless you turn the non fading output (refer to *Using non fading output* on page 36) or subwoofer output (refer to *Using subwoofer output* on page 35) in the audio menu on.
- If you change the subwoofer controller, subwoofer output and non fading output in the audio menu return to the factory settings. 

## Switching the telephone muting/attenuation


Sound from this system is muted or attenuated automatically when a call is made or received using a cellular telephone connected to this unit.

- The sound is turned off, **MUTE** or **ATT** is displayed and no audio adjustment is possible.
- Operation returns to normal when the phone connection is ended.

### 1 Press **FUNCTION** to select **TEL**.

Press **FUNCTION** repeatedly until **TEL** appears in the display.

### 2 Press **◀** or **▶** to switch the telephone muting/attenuation.

Pressing **◀** or **▶** will switch between **TEL:ATT** (attenuation) and **TEL:MUT** (muting) and that status will be displayed. 

## Turning the clock display on or off


You can turn the clock display on or off.

### ● Press **CLOCK** to turn the clock display on or off.

Each press of **CLOCK** turns the clock display on or off.

- The clock display disappears temporarily when you perform other operations, but the clock display appears again after 25 seconds.

#### Note

Even when the sources are off, the clock display appears on the display. Pressing **CLOCK** turns the clock display on or off. 

## Using the AUX source

An IP-BUS-RCA Interconnector such as the CD-RB20/CD-RB10 (sold separately) lets you connect this unit to auxiliary equipment featuring RCA output. For more details, refer to the IP-BUS-RCA Interconnector owner's manual.

### Selecting **AUX** as the source

#### ● Press **SOURCE** to select **AUX** as the source.

Press **SOURCE** until **AUX** appears in the display.

- If the auxiliary setting is not turned on, **AUX** cannot be selected. For more details, see *Switching the auxiliary setting* on page 39.

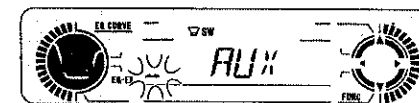
### Setting the **AUX** title

The title displayed for the **AUX** source can be changed.

1 After you have selected **AUX** as the source, press **FUNCTION** and hold until **TITLE IN** appears in the display.

### 2 Press **▲** or **▼** to select a letter of the alphabet.

Each press of **▲** will display a letter of the alphabet in **A B C ... X Y Z**, numbers and symbols in **1 2 3 ... > [ ]** order. Each press of **▼** will display a letter in the reverse order, such as **Z Y X ... C B A** order.



### 3 Press **▶** to move the cursor to the next character position.

When the letter you want is displayed, press **▶** to move the cursor to the next position and then select the next letter. Press **◀** to move backwards in the display.

### 4 Move the cursor to the last position by pressing **▶** after entering the title.

When you press **▶** one more time, the entered title is stored in memory.


### 5 Press **BAND** to return to the playback display.

## Setting the level indicator

These are two stored level indicator to select from.

### ● Press **EQ** and hold to select the level indicator.

Press **EQ** and hold repeatedly to switch between the following settings:

Level indicator 1—Level indicator 2—Level indicator full—Level indicator off 

## Additional Information

### Understanding built-in CD player error messages

When problems occur during CD play an error message may appear on the display. If an error message appears on the display refer to the table below to see what the problem is and the suggested method of correcting the problem. If the error cannot be corrected, contact your dealer or your nearest Pioneer Service Center.

Message	Cause	Action
<b>ERROR-11, 12, 17, 30</b>	Dirty disc	Clean disc.
<b>ERROR-11, 12, 17, 30</b>	Scratched disc	Replace disc.
<b>ERROR-10, 11, 12, 17, 30, A0</b>	Electrical or mechanical	Turn the ignition ON and OFF, or switch to a different source, then back to the CD player.
<b>ERROR-22, 23</b>	The CD format cannot be played back	Replace disc.
<b>ERROR-44</b>	All tracks are skip tracks	Replace disc.
<b>HEAT</b>	CD player overheated	Turn off the CD player until the CD player cools down.

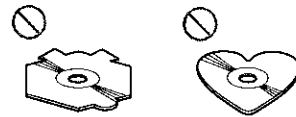


### CD player and care

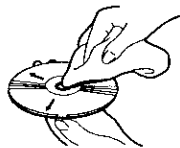
- Use only CDs that have either of the two Compact Disc Digital Audio marks as shown below.



- Use only normal, round CDs. If you insert irregular, non-round, shaped CDs they may jam in the CD player or not play properly.



- Check all CDs for cracks, scratches or warped discs before playing. CDs that have cracks, scratches or are warped may not play properly. Do not use such discs.
- Avoid touching the recorded (non-printed) surface when handling the disc.
- Store discs in their cases when not in use.
- Keep discs out of direct sunlight and do not expose the discs to high temperatures.
- Do not attach labels, write on or apply chemicals to the surface of the discs.
- To clean dirt from a CD, wipe the disc with a soft cloth outward from the center of the disc.



- If the heater is used in cold weather, moisture may form on components inside the CD player. Condensation may cause the CD player to not operate properly. If you think that condensation is a problem turn off the CD player for an hour or so to allow the CD player to dry out and wipe any damp discs with a soft cloth to remove the moisture.
- Road shocks may interrupt CD playback. □

## Additional Information

### CD-R/CD-RW discs

- When CD-R/CD-RW discs are used, playback is possible only for discs which have been finalized.
- It may not be possible to play back CD-R/CD-RW discs recorded on a music CD recorder or a personal computer because of disc characteristics, scratches or dirt on the disc, or dirt, condensation, etc. on the lens of this unit.
- Playback of discs recorded on a personal computer may not be possible depending on the application settings and the environment. Please record with the correct format. (For details, contact the manufacturer of the application.)
- Playback of CD-R/CD-RW discs may become impossible in case of direct exposure to sunlight, high temperatures, or the storage conditions in the car.
- Titles and other text information recorded on a CD-R/CD-RW disc may not be displayed by this unit (in the case of audio data (CD-DA)).
- This unit conforms to the track skip function of the CD-R/CD-RW disc. The tracks containing the track skip information are skipped automatically (in case of audio data (CD-DA)).
- If you insert a CD-RW disc into this unit, time to playback will be longer than when you insert a conventional CD or CD-R disc.
- Read the precautions with CD-R/CD-RW discs before using them. □

### MP3, WMA and WAV files

- MP3 is short for MPEG Audio Layer 3 and refers to an audio compression technology standard.
- WMA is short for Windows Media Audio and refers to an audio compression technology that is developed by Microsoft Cor-

poration. WMA data can be encoded by using Windows Media Player version 7 or later.

- WAV is short for waveform. It is a standard audio file format for Windows®.
- With some applications used to encode WMA files, this unit may not operate correctly.
- With some applications used to encode WMA files, album names and other text information may not be correctly displayed.
- This unit allows playback of MP3/WMA/WAV files on CD-ROM, CD-R and CD-RW discs. Disc recordings compatible with level 1 and level 2 of ISO9660 and with the Romeo and Joliet file system can be played back.
- It is possible to play back multi-session compatible recorded discs.
- MP3/WMA/WAV files are not compatible with packet write data transfer.
- The max. number of characters which can be displayed for a file name, including the extension (.mp3, .wma or .wav), is 64 characters from the first character.
- The max. number of characters which can be displayed for a folder name is 64 characters.
- In case of files recorded according to the Romeo and Joliet file system, only the first 64 characters can be displayed.
- When playing discs with MP3/WMA/WAV files and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs, both types can be played only by switching mode between MP3/WMA/WAV and CD-DA.
- The folder selection sequence for playback and other operations becomes the writing sequence used by the writing software. For this reason, the expected sequence at the time of playback may not coincide with the actual playback sequence. However, there also is some writing software which permits setting of the playback order.

## Additional Information

### Important

- When naming an MP3/WMA/WAV file, add the corresponding filename extension (.mp3, .wma or .wav).
- This unit plays back files with the filename extension (.mp3, .wma or .wav) as an MP3/WMA/WAV file. To prevent noise and malfunctions, do not use these extensions for files other than MP3/WMA/WAV files.

### MP3 additional information

- Files are compatible with the ID3 Tag Ver. 1.0, 1.1, 2.2, 2.3 and 2.4 formats for display of album (disc title), track (track title) and artist (track artist).
- Only when MP3 files of 32, 44.1 and 48 kHz frequencies are played back, the emphasis function is valid. (16, 22.05, 24, 32, 44.1, 48 kHz sampling frequencies can be played back.)
- There is no m3u playlist compatibility.
- There is no compatibility with the MP3i (MP3 interactive) or mp3 PRO format.
- The sound quality of MP3 files generally becomes better with an increased bit rate. This unit can play recordings with bit rates from 8 kbps to 320 kbps, but in order to be able to enjoy sound of a certain quality, we recommend using only discs recorded with a bit rate of at least 128 kbps.

### WMA additional information

- This unit plays back WMA files encoded by Windows Media Player version 7, 7.1, 8 and 9.
- You can only play back WMA files in the frequencies 32, 44.1 and 48 kHz.
- The sound quality of WMA files generally becomes better with an increased bit rate. This unit can play recordings with bit rates from 48 kbps to 320 kbps (CBR) or from 48 kbps to 384 kbps (VBR), but in order to be

able to enjoy sound of a certain quality, we recommend using discs recorded with a higher bit rate.

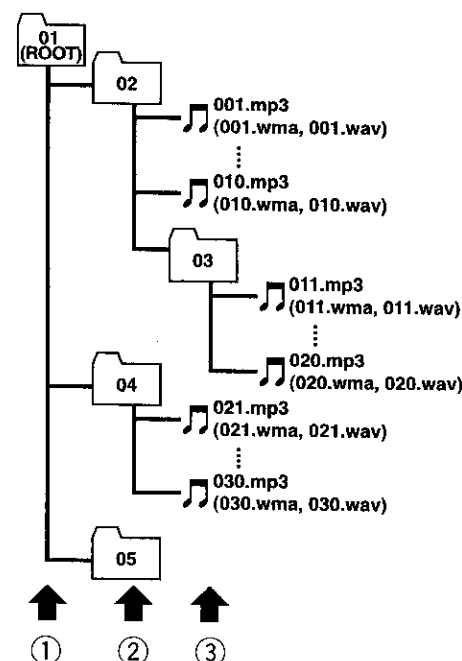
### WAV additional information

- This unit plays back WAV files encoded in Linear PCM (LPCM) format or MS ADPCM format.
- You can only play back WAV files in the frequencies 16, 22.05, 24, 32, 44.1 and 48 kHz (LPCM), or 22.05 and 44.1 kHz (MS ADPCM). The sampling frequency shown in the display may be rounded.
- The sound quality of WAV files generally becomes better with a larger number of quantization bits. This unit can play recordings with 8 and 16 (LPCM) or 4 (MS ADPCM) quantization bits, but in order to be able to enjoy sound of a certain quality, we recommend using discs recorded with the larger number of quantization bits. ■

### About folders and MP3/WMA/WAV files

- An outline of a CD-ROM with MP3/WMA/WAV files on it is shown below. Subfolders are shown as folders in the folder currently selected.

## Additional Information



① First level

② Second level

③ Third level

### Notes

- This unit assigns folder numbers. The user can not assign folder numbers.
- It is not possible to check folders that do not include MP3/WMA/WAV files. (These folders will be skipped without displaying the folder number.)
- MP3/WMA/WAV files in up to 8 tiers of folders can be played back. However, there is a delay in the start of playback on discs with numerous tiers. For this reason we recommend creating discs with no more than 2 tiers.
- It is possible to play back up to 99 folders on one disc. ■

## Additional Information

### Terms

#### Bit rate

This expresses data volume per second, or bps units (bits per second). The higher the rate, the more information is available to reproduce the sound. Using the same encoding method (such as MP3), the higher the rate, the better the sound.

#### ID3 tag

This is a method of embedding track-related information in an MP3 file. This embedded information can include the track title, the artist's name, the album title, the music genre, the year of production, comments and other data. The contents can be freely edited using software with ID3 Tag editing functions.

Although the tags are restricted to the number of characters, the information can be viewed when the track is played back.

#### ISO9660 format

This is the international standard for the format logic of CD-ROM folders and files. For the ISO9660 format, there are regulations for the following two levels.

##### Level 1:

The file name is in 8.3 format (the name consists of up to 8 characters, half-byte English capital letters and half-byte numerals and the "\_" sign, with a file-extension of three characters.)

##### Level 2:

The file name can have up to 31 characters (including the separation mark "." and a file extension). Each folder contains less than 8 hierarchies.

#### Extended formats

Joliet:

File names can have up to 64 characters.

Romeo:

File names can have up to 128 characters.

#### Linear PCM (LPCM)/Pulse code modulation

This stands for linear pulse code modulation, which is the signal recording system used for music CDs and DVDs.

#### m3u

Playlists created using the "WINAMP" software have a playlist file extension (.m3u).

#### MP3

MP3 is short for MPEG Audio Layer 3. It is an audio compression standard set by a working group (MPEG) of the ISO (International Standards Organization). MP3 is able to compress audio data to about 1/10th the level of a conventional disc.

#### MS ADPCM

This stands for Microsoft adaptive differential pulse code modulation, which is the signal recording system used for the multimedia software of Microsoft Corporation.

#### Multi-session

Multi-session is a recording method that allows additional data to be recorded later. When recording data on a CD-ROM, CD-R or CD-RW, etc., all data from beginning to end is treated as a single unit or session. Multi-session is a method of recording more than 2 sessions in one disc.

#### Number of quantization bits

The number of quantization bits is one factor in the overall sound quality; the higher the "bit-depth", the better the sound quality. However, increasing the bit-depth also increases the amount of data and therefore storage space required.

#### Packet write

This is a general term for a method of writing on CD-R, etc. at the time required for a file,

## Additional Information

just as is done with files on floppy or hard discs.

#### VBR

VBR is short for variable bit rate. Generally speaking CBR (constant bit rate) is more widely used. But to flexibly adjust the bit rate according to the needs of audio compression, it is possible to achieve compression priorities sound quality.

#### WAV

WAV is short for waveform. It is a standard audio file format for Windows®.

#### WMA

WMA is short for Windows Media Audio and refers to an audio compression technology that is developed by Microsoft Corporation. WMA data can be encoded by using Windows Media Player version 7 or later. Microsoft, Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries. [■]



## Additional Information

### Specifications

#### General

Rated power source	14.4 V DC
	(allowable voltage range: 12.0 – 14.4 V DC)
Grounding system	Negative type
Max. current consumption	10.0 A
Dimensions (W × H × D):	
DIN	
Chassis	178 × 50 × 157 mm
Nose	188 × 58 × 19 mm
D	
Chassis	178 × 50 × 162 mm
Nose	170 × 46 × 14 mm
Weight	1.4 kg

#### Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.

Maximum power output	50 W × 4
	50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance	4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance	2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):	
Low	
Frequency	40/80/100/160 Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12dB
Mid	
Frequency	200/500/1k/2k Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12dB
High	
Frequency	3.15k/8k/10k/12.5k Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12dB
Loudness contour	
Low	+3.5 dB (100 Hz), +3 dB (10 kHz)
Mid	+10 dB (100 Hz), +6.5 dB (10 kHz)

High	+11 dB (100 Hz), +11 dB (10 kHz) (volume: -30 dB)
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#### Tone controls:

##### Bass

Frequency	40/63/100/160 Hz
Gain	±12dB

##### Treble

Frequency	2.5k/4k/6.3k/10k Hz
Gain	±12dB

#### HPF:

Frequency	50/80/125 Hz
Slope	-12 dB/oct

#### Subwoofer:

Frequency	50/80/125 Hz
Slope	-18 dB/oct
Gain	±12dB
Phase	Normal/Reverse

#### CD player

System	Compact disc audio system
Usable discs	Compact disc
Signal format:	
Sampling frequency	44.1 kHz
Number of quantization bits	16: linear
Frequency characteristics	5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio	94 dB (1 kHz) (IEC-A network)
Dynamic range	92 dB (1 kHz)
Number of channels	2 (stereo)
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9
WAV signal format	Linear PCM & MS ADPCM

#### FM tuner

Frequency range	87.5 – 108.0 MHz
Usable sensitivity	8 dBf (0.7 μV/75 Ω mono, S/N: 30 dB)
50 dB quieting sensitivity	10 dBf (0.9 μV/75 Ω mono)
Signal-to-noise ratio	75 dB (IEC-A network)
Distortion	0.3 % (at 65 dBf, 1 kHz, stereo) 0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response	30 – 15,000 Hz (±3 dB)
Stereo separation	45 dB (at 65 dBf, 1 kHz)

#### AM tuner

Frequency range	531 – 1,602 kHz (9 kHz) 530 – 1,640 kHz (10 kHz)
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## Additional Information

Usable sensitivity	18 μV (S/N: 20 dB)
Signal-to-noise ratio	65 dB (IEC-A network)

#### Infrared remote control

Wavelength	940 nm ±50 nm
Output	typ; 12 mw/sr per Infrared LED

#### Note

Specifications and the design are subject to possible modifications without notice due to improvements. □